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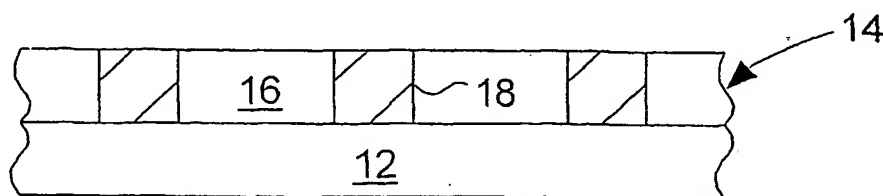
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(54) Title: NANOSTRUCTURES PRODUCED BY PHASE-SEPARATION DURING GROWTH OF (III-V)_{1-x}(IV₂)_x ALLOYS



(57) Abstract: Nanostructures (18) and methods for production thereof by phase separation during metal organic vapor-phase epitaxy (MOVPE). An embodiment of one of the methods may comprise providing a growth surface in a reaction chamber and introducing a first mixture of precursor materials into the reaction chamber to form a buffer layer (12) thereon. A second mixture of precursor materials may be provided into the reaction chamber to form an active region (14) on the buffer layer (12), wherein the nanostructure (18) is embedded in a matrix (16) in the active region (14). Additional steps are also disclosed for preparing the nanostructure (18) product for various applications.

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